CAR WORKSHOP.COM SYSTEM

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SUPERVISOR'S DECLARATION

I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Bachelor of Computer Science (Software Engineering).

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I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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ABSTRACT

Car Workshop.com System is a system that especially design to the customer to book their appointment date of servicing the car at anytime and anywhere. The common problem faced is customer need to be waiting for a long time just to follow the queue who arrive first will get their car to be service first. Thus, the objective of this project is to develop a web-based system especially for car workshop that also can be used by customer for example to book an appointment to service their car. Car Workshop.com System is develop by using C# programming language and the system is tests using User Acceptance Test in order to know whether the system meets with requirements that needed by the customer or not. The methodology used for this study is Rapid Application Development which more emphasizing the rapid development of the prototyping and user interface for a short time of delivering the system. RAD allow the early system to be integrate together and can get constant user feedback from the user. After the system is fully developed, testing is be done by using User Acceptance Test in order to know whether the system meets with user requirements or not and to detect the error or bugs so that it can be fixed before deliver the system to the external environment. The test is to ensure that the system already achieved the objective and all function work accordingly and also able to solve the problem statement. As the result, a web based system for the car workshop are developed that allow customer to book an appointment beforehand, calculate the overall estimation cost and more.

ABSTRAK

Sistem Bengkel Kereta.com adalah satu sistem yang direka khusus kepada pelanggan untuk menempah tarikh temu janji mereka untuk servis kereta pada bila-bila masa dan di mana sahaja. Masalah utama yang dihadapi ialah pelanggan perlu menunggu lama untuk servis kereta mereka kerana mungkin ada orang sebelum tiba giliran mereka. Oleh itu, matlamat projek ini adalah untuk membangunkan sistem berasaskan web terutamanya untuk bengkel kereta yang juga boleh digunakan oleh pelanggan sebagai contoh untuk membuat tempahan untuk perkhidmatan kereta mereka. Sistem Bengkel Kereta.com dibangunkan dengan menggunakan bahasa komputer C # dan sistemnya diuji menggunakan Uji Penerimaan Pengguna untuk mengetahui apakah sistem memenuhi permintaan yang diperlukan oleh pelanggan atau tidak. Metodologi yang digunakan untuk kajian ini adalah Pembangunan Aplikasi Rapid yang lebih menekankan perkembangan pesat prototaip dan antara muka bagi sistem yang dibangunkan dalam masa yang singkat. RAD membenarkan sistem awal untuk diintegrasikan bersama dan dapat mendapatkan maklum balas pengguna yang berterusan dari pengguna. Selepas sistem dibangunkan sepenuhnya, ujian dilakukan dengan menggunakan Ujian Penerimaan Pengguna untuk mengetahui sama ada sistem itu memenuhi keperluan pengguna atau tidak dan untuk mengesan ralat atau bug supaya ia dapat diperbaiki sebelum menyampaikan sistem kepada persekitaran luaran . Ujian ini adalah untuk memastikan bahawa sistem telah mencapai objektif dan semua fungsi berfungsi dengan sewajarnya dan juga dapat menyelesaikan penyataan masalah. Akibatnya, sistem berasaskan web untuk bengkel kereta dibangunkan yang membolehkan pelanggan membuat tempahan terlebih dahulu, mengira kos anggaran keseluruhan dan banyak lagi.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CWS	Car Workshop.Com System
HTML	Hypertext Markup Language
PHP	Hypertext Preprocessor
CSS	Cascading Style Sheets
OOP	Object-oriented Programming
RAD	Rapid Application Development
SDLC	Software Development Life Cycle

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDY

Nowadays, the increasing number of cars on the road shows that almost everyone have owning a car. However, not everyone know how to keep the car in good condition and deals with it is there are any problem arises later so that the car can be used in long time especially the new buyer and women. New car or old car always need to do the regular servicing especially if the car are used extensively. Whether it is expensive car or a normal one, the car are still made up with many kinds of component that combine together and can be move around. Sometimes when there are some components are malfunctioning, it can cause the car broke down. The owner that doesn't know anything about the car will face difficulties to fix the car. Thus, the workshop will become the place for the owner to get the information about what components are malfunctioning and the causes of it and also fix their car. However, there are some people tend to forget to service their car due to busy working and not have enough time to wait for the car to be services. This will only give bad effects to the car owner in the future.

Besides that, regularly servicing the car can save a lot of money and avoid high cost of repairing the car. Usually when buy a new car, the car need to be maintenance when reach the targeted mileage. The handbook that given by the manufacturer will provides all the information when the car needs to be serviced. Mostly, the car will be servicing at the car service centre. Therefore, this project is develops in order to help the car owner from facing many difficulties and ease their life. Car Workshop.com System (CWS) will help the car owner to decide what type of services that their car needed when reach certain mileage by insert the current mileage and also last time they servicing the car. Not only that, they also can book the

appointment of services beforehand and also can estimate the total services cost overall. This will help the car owner to ensure that their car in always in good condition and safe to be use for a long time. Other than that, CWS also will provided some of important car care tips which can be informative to the car owner.

In a nutshell, CWS is a system that will let the car owner to be more ease and avoid bad things from happening. This system also provides about all the type of services that be provided and the basic things about the car. Not only that, the car owner can also know the estimation cost of servicing the car based on the type of services that they prefer to be done on their car. The workshop will be the ones who insert all the data in the system because this system will use web-based system platform. This system will help to reduce the cost on maintenance cars as the car will be always in good condition.

1.2 PROBLEM STATEMENT

First problem is mostly of the small workshops when their customer want to service the car, customer has to come at the workshop first to set the appointment date and later on the services can be done according on the appointment date. If they are lucky enough, they can services their car on that day without need to set the appointment date of services and maintenance. This is because the small workshops doesn't have system that allow their customer to book the type of services online and then can set the appointment date. Usually, this kind of system can be found on big car service centre. The advantages of this system are can lighten the burden on their customer especially for those who are busy working and makes the car service centre management become more efficient and reliable in scheduling all the services and maintenance appointment. Thus, a further study will be done by taking the example from car service centre system especially on how the booking appointment system works and study the existing of workshop maintenance system.

Then, second problem is that some of car owner do not know what type of services that their car needed when reach certain mileage. Unfortunately, the car performance will be bad. An expert system is wished to assist those who are in need of guides to deal with their car's

problems (N.Verma, S.Jain, R.Aggarwal et al., 2010). Thus, by using Car Workshop.com System (CWS) they can set the appointment date for service their car and if they don't know what type of services that suitable for their car, CWS can help these car owner to decide what type of services that needed by their car when achieve certain mileage. Not only that, CWS is a web-based system means that they can access the system using laptop or computer at the office during office hour.

Lastly, the third problem is before this at the workshop, they only keep the record containing the services appointment date manually. Therefore, CWS is develop in order to test the system for example, car owner need to select the type of services they want first and choose the appointment date they prefer to do service. After that, they also can know the estimated cost of services based on type of services they wish to be done. Lastly, the workshop staff can view all the record of appointment date from previous services in the system. This will help the workshop to keep their record in more productive way as it is easy to be access and the searching will be much easier because everything is in the system and also will not face any problem such as losing the record.

1.3 OBJECTIVE

The main objectives of this project are:

i. To study the existing car workshop system and propose suitable modules for Car Workshop.com System.
ii. To develop a web-based system for car workshop.
iii. To test the functionality of Car Workshop.com System.

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